the surface and equalizing the draught as described; 3rd. The combination of the fire chamber for burning wood with the hot air and combustion chambers constructed as specified; 4th. The stationary bars m, and shaking grate n, for burning wood, constructed and arranged as described.

No. 3557. JAMES O. WATERHOUSE, Sherbrooke, Que., 15th June, 1874, for 5 years: "Sewing Machine." (Machine à coudre.)

Claim.—1st. The crank in the shaft A, the connection D, when worked by the crank c, and slot d, and the joints f, f, to convey motion to the shuttle; 2nd. The device for giving horizontal motion to the feeder by means of the cam H, and connection I, working in connection with the rocker shaft J; 3rd. A device for varying the rise of the feeder above the top surface of the bed plate, which is operated from the top surface of the bed plate.

INDEX OF INVENTIONS.

Barrel heater, Alsom E. Salisbury 3501
Bed bottom, spring, L. Gill, and E. S. Coon 3525
Bolts, machine for cutting, J. Dawson 3535
Boots and shoes, moulded box for the toes of D.H. Packard 3550
Boring machine, G. W. McCready 3496
Burial cases, W. and P. West 3516
Car-couplings, W. M. Wiswell 3522
" E. W. Barker 3537
" Marnell B. Marcum 3553
" self-acting, M. Reeves 3492
" self-connecting, A. H. Malcom 3495
Car replacer, E. Newcomb 3531
Carriages, L. K. Drew 3505
Caustic alkalis, process for coating, B. T. Babbitt 3554
" package, B. T. Babbitt 3555
Clover hulling, &c., machines, J. Bradley and J. Nicholas 3504
Coffer-dams, R. Litster 3523
Cooking stove or range, portable, J. H. Wentworth 3547
Copper and other pyrites, process for cleaning and concentrating, F. A. H. LaRue 3497
Corsets, G. L. Eason 3526
Faucets, A. D. Cable 3517
Furnaces for burning oil, &c., F. Hungerford 3538
Furnace, hot air, W. H. Bond 3556
Gas and other fluids, machine for regulating the pressure of, W. L. Horne 3541
Gas burners, E. Evans 3511
Gas retorts, A. C. Rand 3537
Glass furnaces, J. Lydiatt and E. R. Kent 3502
Grain meter, automatic registering, G. G. Felland 3539
Grain separating, &c., machines, J. Bradley & J. Nicholas 3504
Harvester, H. A. Howe 3509
Hoistways, J. W. Meaker 3533
Hose, E. A. Street 3510
Jacks, lifting, A. D. Cable 3518
Knitting machines, B. Ward 3530
Locking cell and other gates, machine for, D. Lalor 3500
Lock, hasp, A. B. Smith and G. H. Comer 3503
Locomotive feed water heater, J.P. Magoon & H.Fairbanks 3546
Mail bags, H. Gross 3527
Marble, artificial, W. Humphrey 3506
Meat, process for curing and packing, I. Atkinson 3497
Milking stool, J. L. Sprague 3515
Nut lock, J. S. Ellis 3524
Ores and precious metals, machines for washing, concentrating and amalgamating, W. T. Rickard 3493
Paper fyles, J. Bennett 3529
Ploughs, gang, G. Wilkinson 3512
Railway switch, P. J. Reynolds 3521
Saws for logging, S. Schofield 3534
Saws, machine for gumming, S. P. Olney 3508
Sewing machine, J. C. Waterhouse 3557
" treadles for, J. P. Jones 3551
Shoemaker's combination tool, Y. M. C. Johnson 3543
Steam engines, lubricators for, E. McCoy, G. G. Roby and C. P. Wiard 3499
Steam trap, J. H. Blessing and T. Townsend 3513
Steel manufacturing and welding steel & iron, J. Absterdam 3520
Stone cutting machinery, diamond, H. Cottrell 3507
Stone or marble, artificial, H. Jefferson 3548
Straw and hay cutter, T. Hazard 3544
" " " 3545
Thrashing, &c., machines, J. Bradley and J. Nicholas 3504
Trap, animal, J. Gould 3552
Tucking device, Eliza M. Jones 3519
Valve, balanced, C. H. Hutchinson 3549
Ventilating apparatus, J. Bradley 3532
Wall paper, machine for hanging, R. Bustin 3494
Washing machines, F. W. Beckwith 3528
" G. T. Colby 3540
" J. W. Ricker 3542
Wheels, E. E. Wheeler 3511

INDEX OF PATENTEES.

Absterdam, John, manufacturing steel and welding steel and iron 3520
Atkinson, Isaac, process for curing and packing meat 3498
Babbitt, Benjamin T., process for coating caustic alkali 3554
Babbitt, Benjamin T., caustic alkali package 3555
Barker, Ezekiel W., car-coupling 3537
Beckwith, Francis W., washing machines 3528
Bennet, James, paper fyles 3529
Blessing, James H., and T. Townsend, steam trap 3513
Bond, William H., hot air furnace 3556
Bradley, James, and J. Nicholas, combined thrashing, grain separating and clover hulling machines 3504
Bradley, John, ventilating apparatus 3532
Bustin, Robert, *machine for hanging wall paper* 3494
Cable, Austin D., faucets 3517
" lifting jacks 3518
Colby, George J., washing machine 3540
Comer, George H., and A. B. Smith, hasp lock 3503
Coon, Elijah S., and L. Gill, spring bed bottoms 3525
Cottrell, Herbert, diamond stone cutting machinery 3507
Dawson, James, machines for cutting bolts 3535
Drew, Lavinus K., carriages 3505
Eason, George L., corsets 3526
Ellis, John S., nut locks 3524
Evans, Edwin, gas burners 3511
Fairbanks, Henry, and I. P. Magoon, locomotive feed water heater 3546
Felland, Gunder G., automatic registering grain meter 3539
Gill, Lucius, and E. S. Coon, spring bed bottoms 3525
Gould, John, animal trap 3552
Gross, Henry, mail bags 3527
Hazard, Thomas, straw and hay cutter 3544
" " 3545
Howe, Henry, A., harvesters 3509
Horne, William L., machine for regulating the pressure of gas and other fluids 3541
Humphrey, William, artificial marble 3506
Hungerford, Fayette, *furnaces for burning oil, &c.* 3538
Hutchinson, Charles H., balanced valve 3549
Jefferson, Hugh, artificial stone or marble 3548
Johnson, Yancy M. C., combination tool for shoemakers 3543
Jones, Eliza M., tucking device 3519
Jones, John T., treadle for sewing machines 3551
Kent, Edward R., and J. Lydiatt, glass furnaces 3502
Lalor, Thomas, machine for locking cell and other gates 3500
LaRue, François A. H., process for cleaning and concentrating copper and other pyrites 3497
Litster, Robert, coffer-dam 3523
Lydiatt, James, and E. R. Kent, glass furnaces 3502
McCoy, Elijah, G. G. Roby, and C. G. Wiard, lubricators for steam engines 3499
McCready, George W., boring machine 3496
Magoon, Israel P., and H. Fairbanks, locomotive feed water heater 3546
Malcom, Andr w H., self-connecting car-coupling 3 95
Marcum, Marnell B., car-coupling 3553
Meager, John W., hoistways 3533
Newcomb, Elisha, car replacer 3531
Nicholas, James, and J. Bradley, combined thrashing, grain separating and clover hulling machines 3504
Olney, Sandford P., machine for gumming saws 3508
Packard, Davis H., moulded box for the toes of boots and shoes 3550
Rand, Alonzo C., gas retorts 3536
Reeves, Mathew, self acting car-coupling 3492
Reynolds, Thomas J., railway switch 3521
Rickard, William J., machines for washing, concentrating and amalgamating ores of precious metals 3493
Ricker, John W., washing machine 3542
Roby, George G., E. McCoy, and C. G. Wiard, lubricators for steam engines 3499
Salisbury, Alsom E., barrel heater 3501
Schofield, Socrates, logging saws 3534
Smith, Alfred B., and G. H. Comer, hasp lock 3503
Sprague, James L., milking stool 3515
Street, Edwin A., hose 3510
Townsend, Frederick, and J. H. Blessing, steam trap 3513
Ward, Benjamin, knitting machines 3530
Waterhouse, James C., sewing machine 3557
Wentworth, James H., portable range or cooking stove 3547
West, William, and Peter, (assignees), burial cases 3516
Wheeler, Everett E., wheels 3511
Wiard, Charles G., E. McCoy, and G. G. Roby, lubricators for steam engines 3499
Wilkinson, George, gang ploughs 3512
Wiswell, William M., car couplings 3522